Nine Year Basic Education Policy Interventions and Students’ Enrolments Rates at Lower Secondary Level: A Lesson from Rwanda

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Abstract
This study examined the relationship between Nine Year Basic Education (9YBE) Policy interventions and students’ enrolment rates at Lower Secondary in the Republic of Rwanda. The study analyzed views of 218 teachers in 29 day-lower secondary schools in Gisagara District. Questionnaire and focus group discussions were research instruments. Data were analyzed using frequency tables, percentages, and chi-square test at the 0.05 significance level. The respondents (98.46%) rated the 9YBE policy interventions to have an association with students’ enrolments rate due to the combination of interventions. Chi-square test results showed that each 9YBE policy intervention scored a p-value less than 0.05. This infers that the 9YBE policy interventions had a statistically significant association with students’ enrolment rates by addressing child, household, and school-based problems simultaneously. Moreover, a supporting system for overage children and those who progress without prerequisite competencies was suggested as a policy option for high enrolment.

Keywords: Nine Year Basic Education (9YBE) Policy; Teachers’ Perception; Students’ Enrolment; Educational Intervention; Rwanda Education System

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Introduction: Background to the Study

The major debates for the 21st century on education revolves around; access, participation of learners at all levels and quality of education compared to the investment made available for human capital development (UNESCO Institute for Statistics, 2017a; 2017b). It is believed that the level of access to and participation in education determines the present and future stock of human capital disposable to a country for its economic growth (Olaniyan & Okemakinde, 2008). This, therefore, has brought different countries to reform their existing and adopt new education policies to ensure that everyone has the right to participate in education (UNESCO, 2013).

Reports on education from Latin America and Asia (di Gropello, 2006; Asia and Pacific Regional Bureau for Education, 2015), in India (Pandit, 2016; National Council of Educational Research and Training (NCERT), 2016), in Sub Saharan Africa (Africa-America Institute (AAI), 2015) in East Africa – Kenya, Rwanda, Uganda, and others (Kenya. Ministry of Education, Science and Technology, 2014; Uganda. Ministry of Education and Sport, 2015; Japan International Cooperation Agency (JICA), 2012) all show that the implementation of a compulsory and free education policy for children aged 6/7 to 14/15 both at primary and lower secondary school levels has resulted into increased rates of students’ enrolments and completion rates at both levels. In Rwanda, this policy is referred to as one governing the nine years of fundamental education.

In the context of Rwanda, Nine Year Basic Education (9YBE) policy refers to an educational policy that guides the provision of compulsory and school fees-free education up to lower secondary education for all school-age children aged between 7 and 15 years old (Ministry of Education [MINEDUC], 2008). The effective implementation of the 9YBE policy, like any other basic educational policies in other countries, has been believed to have enabled all children of school age going to enrol in school and complete their education (Mutege, Muriithi, & Wanjala, 2017; EFA Global Monitoring Report, 2015; World Bank, 2011; Oketch & Somerset, 2010; Chimombo, 2005; Di Gropello, 2006). At the first hand, the policy was expected to reduce primary repetition and dropout rates and then increase both gross and net enrolments at lower secondary education level through high primary school level completion and transition rates (see Table 1 below).

<table>
<thead>
<tr>
<th>School Year</th>
<th>9YBE Targets</th>
<th>Gross Enrolment rate</th>
<th>Net Enrolment rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013/14</td>
<td></td>
<td>60</td>
<td>25</td>
</tr>
<tr>
<td>2014/15</td>
<td></td>
<td>67</td>
<td>29</td>
</tr>
<tr>
<td>2015/16</td>
<td></td>
<td>74</td>
<td>32</td>
</tr>
<tr>
<td>2016/17</td>
<td></td>
<td>78</td>
<td>36</td>
</tr>
<tr>
<td>2017/18</td>
<td></td>
<td>86</td>
<td>40</td>
</tr>
</tbody>
</table>

Source: MINEDUC (2013, p. 84)

Table 1 indicates that the targeted achievement to result from effective implementation of the 9YBE policy was to raise the gross enrolment rate at lower secondary education to 86 per cent in 2017/18 from 60 per cent in 2013/14 as the base year. The net enrolment rate was to increase from 25.0 per cent in 2013/14 to 40 per cent in 2017/18. The changes were to come from the effects of providing 9YBE. The changes were also to be witnessed at all other levels of education causing but
not limited to the expansion of the capacity of upper secondary education and higher education levels to accommodate the high influx of students graduating from the 9YBE level. (MINEDUC, 2013).

Reports on Rwanda’s basic education progress revealed that despite the implementation of the 9YBE policy, access to and participation in post-primary education remain a challenge. At lower secondary education, the target was to achieve a gross and net enrolment rate of 60 and 25 per cent respectively by 2013/14 (MINEDUC, 2013). However, the realization in gross and net enrolment rate was only 49.8 and 22.7 per cent in 2015 correspondingly as indicated by the MINEDUC (2015a). Despite the effort made to increase participation, the 2018 Education statistics showed a gross and net enrolment rate of 47.7 and 27.2 per cent respectively in 2018 (MINEDUC, 2018, p. 45). These statistics were far below the targets (gross enrolment rate =86 per cent; net enrolment rate =40 per cent in 2017/18) as envisaged in the Education Sector Strategic Plan 2013/18 (MINEDUC, 2013, p. 84).

The continued widening of the non-schooling gap of students at lower secondary education in Rwanda (see MINEDUC, 2020; 2018; 2016; 2015a; IICA, 2012; World Bank, 2011) warrants the study on the effect of the implementation of 9YBE policy interventions on students' enrolment. The policy interventions on the 9YBE targeted the construction of new schools, classrooms and provision of facilities, establishing day secondary schools to reduce distance students travel to and from school, provision of meals at school and creating room for flexible students’ progression between grades and levels. All these interventions in association with the abolition of school fees were believed to improve the situation in access to and participation in education (World Bank, 2018; AAI, 2015; EFA Global Monitoring Report, 2015; World Bank, 2009). The questions to ask are, what is the effect of the implementation of 9YBE policy interventions on students’ enrolments as seen from the teachers ‘perspective? How has the implementation of 9YBE policy interventions improved the students’ enrolment rates at the lower secondary education level?

Achievements and Failures in Students’ Enrolments: Empirical Review
The countries’ experiences worldwide, have shown that improvements in students’ enrolments at both primary and secondary have been made due to the implementation of different education policy interventions different countries put in place. Global Partner for Education [GPE] (2020) indicates good progress in primary school level completion rate up to 75 per cent in 2019 from 72 per cent in 2015. This increase has, in turn, affected the rate of enrolment at the lower secondary level. World Bank (2018) ascertains that the expansion of primary school enrolment and completion rates have led to a sharp increase in both demand for and enrolment to lower secondary level. The enrolment rose at least 50 per cent in many parts of the world except in parts of sub-Saharan Africa. However, the capacity of available secondary schools was limited to accommodate only 36 per cent of qualifying secondary students (AAI, 2015). Besides, poverty and food insecurity, conflict, inadequate teaching and learning resources, shortage of staffing in schools, and long-distance travelled from home to school are among factors that hinder high enrolment rates at the secondary education level in many African countries (World Bank, 2018; Musangi et al., 2017; Chimombo, 2005).

World Bank in its report (2018) recognizes expansion of enrolment at primary education above 100 per cent in 2010 for Sub-Saharan Africa and South Asia from 68 per cent and 47 per cent respectively in both regions since the 1970s. According to the report, because of children, household and school centred interventions, students’ enrolment in primary and secondary schools in low-
Income countries has risen drastically in different developing countries. The abolition of school fees and the rising rate of primary education completion has played a major role to increase secondary school enrolments. Despite progress in access, EFA Global Monitoring Report (2015) revealed dropout to be a persistent issue mostly in sub-Saharan Africa. According to the report, at least 20 per cent of children enrolled in primary school are not expected to reach the last grade, and a considerable number of secondary school age are not enrolled in schools due to poverty and child labour.

Other studies on the provision of basic education ascertain that many children can take up their studies due to the reduction of private education cost. The removal of school fees and decline in school levies payable by parents opened the door for many households to afford education, hence the motivation to send them to school. The abolition of school fees and provision of scholarships have removed the existing excuses that children from low-income households could not attend and complete school due to poverty in their families. Also, school fees-free education discouraged administrative practices to send students back home as their parents are not able to pay all school levies on time. This was among other factors that discourage children from poor families to take up their studies (Mutegi et al., 2017; Wanjala & Koriyow, 2017; Oketch & Somerset, 2010; Cameron, 2009; World Bank, 2009).

Construction of new schools and establishing day schools in proximity of habitation was proved to influence students’ enrolment rates due to the reduction of distance children travel between home and school daily. Parents prefer to get their children at a young age enrolled in high-quality schools in proximity to home and to control their education (di Gropello, 2006; Mwaka & Njogu, 2014). Also, the provision of day schools near their homes reduce the financial burden of parents to pay for school hostel and transport fees (Mwaka & Njogu, 2014; Musangi, Mulwa, Migozi, & Kamau, 2017). It was evident that the construction of schools near homes increased the gross enrolment ratio for class I to V to 95 per cent in 2009 from 80 per cent in 1973 in India (NCERT, 2016). Similarly, in Bungoma County, Kenya Enrolment rose from 6,225 in 1970 to 146,206 in 2012 due construction of the new school in proximity (Ngome & Kikechi, 2015) while the provision of day secondary education affected enrolment by 32 percentage points nationally (Mwaka & Njogu, 2014).

Quality of the school environment in terms of availability of teaching-learning materials, classrooms, desks, latrines and many other physical facilities influences students’ enrolment. Parents and students prefer schools whose performance is high and resources are adequate. Inadequate teaching-learning resources are at the basis of creating an additional cost for parents. This is because, in a precarious learning environment, parents endeavour their best to ensure that children are having all the necessary materials, hence extra investment. And, who says additional cost is implicitly saying the declining capacity of the household to afford the service, hence decrease in enrolment or increase in dropouts (Leigha, 2018; Musangi et al., 2017; Ibrahim, Osman, & Bachok, 2014; Birdthistle, Dickson, Freeman, & Javidi, 2011).

Besides, it has been on record that the quality of the school environment and performance work as a marketing asset and positively influence both new enrolments and retention (Musangi et al., 2017; Senimetu, 2015; Kaburu, 2014; Ibrahim et al., 2014; Birdthistle et al., 2011). Insufficient schools, classroom and teaching-learning materials lead school administration to limit the enrolments. The number of registrations, therefore, depends on the number of available classrooms, desks and textbooks in a given school (Kaburu, 2014; Ibrahim, et al., 2014).

Flexibility in students’ progression whether using an automatic promotion or setting repetition principle between grades and levels is another intervention that affects students’ enrolment. Studies
showed that students feel motivated to continue their studies when they are progressing from one grade to a higher one (Khatete, 2018; Stott, Dreyer, & Venter, 2015). Also, academic performance in terms of knowledge acquisition and progression to higher grades is among parents’ criteria for selecting a school. A performing school attracts the attention of parents, hence the high demand for admission (Ibrahim et al., 2014). Where flexibility in students’ progression is limited, the odds too high repetitions and dropouts are high (Khatete, 2018; Chohan & Qadir, 2011). Neither repetition nor suspension or dropout is facilitating the realization of universal basic education. They are, however, influencers of education wastage (Dufitumukiza et al., 2020; Khatete, 2018), Stott et al., 2015; Chohan & Qadir, 2011).

Provision of meals at school is another intervention that countries use to increase students’ enrolments and retention by improving their health status. Although school feeding programme cannot stand alone in increasing both students’ enrolment and retention at a satisfactory level (McEwan, 2013; Buttenheim, Alderman & Friedman, 2011), several studies agree that the programme is effective to alleviate short-term hunger among students, hence the increase in students’ attendance, enrolment, retention and high academic achievement of pupils who benefited the programme (Taylor & Ogbogu, 2016; Yendaw & Dayour, 2015; Khatete, Pendo, & Oyabi, 2013; Espejo, Burbano & Galliano, 2009)

Despite the abolition of school fees, establishing day secondary schools, construction of new schools, providing meals at school and flexible student progression between grades and levels, enrolments at post-primary education levels remain low in many developing countries (UNESCO Institute for Statistics, 2017b; AAI, 2015; EFA Global Monitoring Report, 2015). In Sub Saharan Africa, 17 million primary age children and 67 million secondary age children were out of school. The overall average secondary gross enrolment rates were 25 per cent whereas at lower secondary education was 40 per cent (Lewin, 2007). The current interventions have not addressed satisfactorily the problem of poverty, lack of money for other school requirements, many overage children at the entry stage, issue of pregnancy among girl students, lack of family support, child labour among other impediments to students’ enrolment in basic education (Kaume-Mwinzi, 2017; Tamanna, 2014; Commission Staff Working Party, 2010; di Gropello, 2006; Duryea & Arends-Kuenning, 2001).

Rwanda education statistical year 2019 show that overall secondary gross and net enrolment respectively stood at 42.5 and 24.5 per cent in 2019 from 39.6 and 30.1 per cent in 2018. At the lower secondary level, gross and net enrolments were 53.0 and 31.5 per cent in 2019. This was an indication that the number of students with the official age for secondary education decreased in favour of over-aged students. Also, it was not possible to cover the gap between the huge gross enrolment rate in primary (138.75% between 2016 -2019) and enrolments at the lower secondary level. It was harder to reach 33.5 per cent for net enrolment at lower secondary education (MINEDUC, 2020). This situation warrants the need to investigate the effect of Nine Year basic education on students’ enrolment.

Research Methodology

The study adopted a descriptive survey design mixing both quantitative and qualitative research paradigms and methods for data collection and analysis (Alston & Bowles, 2003). Both numerical data that can be subjected to statistical analysis and respondents’ views in form of texts that can be subjected to analytic induction to find common themes were considered (Creswell, 2012).
Dufitumukiza, A., Wanjala, G., & Khatete, I.

The target population consisted of 504 members of teaching staff in 29-day lower secondary schools in Gisagara District as reported in the 2018 Teacher Placement report by the Gisagara District Education Office. Teachers were targeted for the study because they are the ones who carry out the implementation of education policies at the classroom level. They also have experience with the changes that occur in terms of access to and participation in education in the implementation of the 9YBE policy. They are the principal agent in the provision of education (Chang, 2006). Teachers’ attitudes towards the 9YBE policy become significant in judging the effectiveness and level of implementation of the policies in improving the status of students’ enrolment.

The sample size was 218 respondents. It was determined using the formula by Kerjcie and Morgan (1970)* at a 95 per cent confidence level. Systematic random sampling was used to select research participants for the questionnaire while purposive sampling techniques were used to choose the respondents for focus group discussion (Alston & Bowles, 2003).

Data was gathered using a self-designed questionnaire containing close and open-ended question items and focus group discussions (FGDs). The questionnaire was designed to elicit information on teachers’ views towards the effect of 9YBE on students’ enrolments at lower secondary education on a Likert scale. The questionnaire was made of statements informed by the 9YBE interventions. These include the abolition of school fees, construction of new schools and facilities, establishing day secondary schools, provision of school meals, and flexible progression between grades and transition to secondary education (MINEDUC, 2018; 2013; JICA, 2012). The respondents were asked to reflect on each 9YBE intervention and thereafter show its level of effect on enrolment using a 5-point Likert-type scale. On the scale, 1 stood for Very Low (VL), 2 for Low (L), 3 for Neutral (N), 4 for High (H) and 5 for Very High (VH) effect. Besides, a group of 12 research participants was organized to discuss the effect of each 9YBE intervention and the implementation of the 9YBE policy (overall) on students’ enrolments rates through FGDs. The FGDs guide was made of themes informed by the 9YBE interventions.

Before the instruments were used for data collection, a panel of experts in educational planning went through the instruments to provide comments on how well each proposed question item measured the expected construct. Their comments formed the basis for necessary improvements for the instruments (Matula et al., 2017).

To ensure the reliability of research instruments, a pilot study which consisted of a test run on a small group of research subjects under the same conditions as the intended whole study (Alston & Bowles, 2003) was done to refine questions and remove any ambiguity so that the research instruments are focused on the issues under investigation consistently. The sample size for the pilot study was 31 teachers giving a 14.22 percentage, of the sample size for the projected main study. The test of reliability was done using SPSS version 21. The questionnaire was tested and 0.88 Cronbach’s Alpha coefficient of reliability was realised. This value ascertained that the instrument was sufficiently reliable and ready to be used for the main study (Gliem & Gliem, 2003; George & Mallery, 2003).

Quantitative data were analysed using a frequency table, percentages and chi-square goodness of fit test. One-way chi-square goodness of fit ($\chi^2$) was used to test whether the proportion of cases expected in each group of the categorical variable is equal or unequal (Franke, Ho, & Christie,

\[ s = \frac{(X^2-N\cdot P \cdot (1-P))}{(N^2 \cdot (1-P)^2 \cdot (1-P))} \]

wherby: s = sample size; (X): table value of chi-square for 1 degree of freedom at the desired confidence level, that is 1.96; N = population size which is 504 for this study; P = population proportion which is assumed to be .50; d = the degree of accuracy expressed as proportion .05

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2012). Accordingly, the acceptance or rejection was done based on the comparison between the expected values of the chi-square ($\chi^2_{\text{Tab}}$) at a specific degree of freedom and the actual or calculated value ($\chi^2_{\text{Cal}}$). The decision rules were: (i) If $\chi^2_{\text{Cal}} < \chi^2_{\text{Tab}}$, or p-value < 0.05, do not reject null hypothesis; (ii) If $\chi^2_{\text{Cal}} > \chi^2_{\text{Tab}}$, or p-value > 0.05, reject null hypothesis (George, 2004).

Qualitative data were treated using the thematic content analysis technique. This consisted of listing emerging ideas and identifying keywords used by respondents and then extracting similarities and differences in respondents’ views. Data from focus group discussions were organized by assembling the information around the same themes. They are presented in the form of block text. The researchers interpreted the data by indicating possible patterns, trends and explanations based on reviewed literature and field experiences (Khatete, 2014; Alston & Bowles, 2003). The results are therefore presented below.

Research Findings

This section consists of the presentation, analysis and discussions of the data obtained from teacher respondents through questionnaires and focus group discussions.

<table>
<thead>
<tr>
<th>9YBE Interventions</th>
<th>VL</th>
<th>L</th>
<th>U</th>
<th>H</th>
<th>VH</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Combination of different strategies</td>
<td>0.52%</td>
<td>0.52%</td>
<td>0.52%</td>
<td>23.20%</td>
<td>75.26%</td>
<td>194</td>
</tr>
<tr>
<td>2. Construction of new schools and establishing day secondary schools</td>
<td>0.00%</td>
<td>1.03%</td>
<td>4.62%</td>
<td>46.15%</td>
<td>48.21%</td>
<td>195</td>
</tr>
<tr>
<td>3. Flexible students’ progression</td>
<td>0.51%</td>
<td>1.54%</td>
<td>3.08%</td>
<td>26.15%</td>
<td>68.72%</td>
<td>195</td>
</tr>
<tr>
<td>4. Provision of a school meal</td>
<td>1.56%</td>
<td>11.46%</td>
<td>17.71%</td>
<td>41.15%</td>
<td>28.13%</td>
<td>192</td>
</tr>
<tr>
<td>5. Removal of school fees</td>
<td>0.52%</td>
<td>1.55%</td>
<td>9.28%</td>
<td>32.99%</td>
<td>55.67%</td>
<td>194</td>
</tr>
</tbody>
</table>

Where: VL- Very Low, L-Low, U-Undecided, H-High, VH-Very High, N-Total Number of respondents

Table 2 indicates the teacher respondents’ rating of 9YBE intervention that affect students’ enrolments. It also shows that teacher respondents, according to their rating, had varied appreciation levels about the effect of 9YBE interventions on students’ enrolment. The effect of combining different strategies rates first with 75.26 per cent and 23.20 per cent of respondents who viewed it as very high and high respectively. That is 98.46 per cent who appreciated the effect of the combination of interventions. This implies that using child, household, school and system centred intervention in the provision of basic education has a high effect on students’ enrolment. This result coincides with Musangi et al. (2017), Kaume-Mwinzi (2017), Tamanna (2014) and Lewin (2007) that students’ participation is affected by many factors that attract multiple interventions simultaneously at the child, household and school, and system levels.

Research participants through focus group discussions had an agreement that:

The abolition of school fees has reduced the household cost for education at the secondary education level. Parents are, therefore, motivated to send their children to school (FGD, 2020).
This implies that the negative effect of household financial vulnerability on students’ enrolment is likely to be addressed by interventions that open doors for the reduction of private education cost. This deliberation is in agreement with Mutege et al., (2017) that when parents feel a heavy financial burden, they decline the support to children education. The focus returns on satisfying other household needs. Food insecurity was another hindrance against high enrolment in secondary education. According to research participants:

Negative effects of food insecurity on students’ participation could not be addressed by the abolition of school fees. The issue is likely to be addressed by the provision of food to both children and households (FGD, 2020).

Respondents advocated the provision of meals not only at school but also at the household level. For them, the school meal addressed hunger while the children are at school only and help children to concentrate on learning. This view is in agreement with Taylor and Ogbogu (2016), Khate et al., (2013) and Espejo et al. (2009) that school feeding programme increases students’ enrolment, retentions, attendance and academic performance. In contrast, McEwan (2013) and Buttenheim et al. (2011) missed enough evidence to confirm the impact of school feeding on enrolment status. As the food insecurity gets high at the household level, parents prefer to use children in different home shores for them to concentrate on findings food for the whole family even if the meal is served at school.

The FGDs findings on the construction of new schools and establishing day secondary school revealed that these interventions expanded school places, reduced the long-distance of travel by the children from home to school and back and encouraged parents to send their children to nearby day secondary schools, hence an increase in enrolment. This finding is in concurrence with NCERT (2016) affirming that construction of new schools in proximity of habitation in India resulted in the increase in gross enrolment ratio from 80 in 1973 to 95 per cent in 2009 for class I and V and from 33 in 1973 to 71 per cent in 2009 for class VI to VIII. Besides, the respondents held the view on the construction of new schools, renovation of existing classroom and establishing day secondary school that:

Despite the construction of new schools and establishing day secondary schools, students’ enrolment would have remained low if these interventions were not associated with the removal of school fees and the provision of meals (FGD, 2020).

The respondents’ view implies that there is no single solution that could address all disruptive forces against students’ participation and enrolment in particular. Hence, they rated first the effect of combining interventions on students’ enrolment at lower secondary education. This is in agreement with World Bank, (2018), Snilstveit, et al. (2015) and JICA (2012) who pointed out that administering different interventions that centre on students, their families and the school system leads to better students’ participation and enrolment in particular.

The flexibility in pupils’ progression and transition principles was rated the second with 68.72 and 26.15 per cent of respondents to have a very high and high effect on students’ enrolment rate at lower secondary education respectively. That is 94.87 per cent who positively rated the effect of flexibility progression. Also, FGDs revealed that opening flexibility in the number of learners who move to the next high grade and level has minimized the number of repeaters and dropouts. Each school managed the learners’ progression in its way. The commonality was the promotion of learners to the next grade despite the failure to reach the cut point (50%). As a result, the rate of promotion increases but the quality suffers according to respondents. The transition to lower secondary
education was made flexible by accepting those who succeeded with high scores and those who scored unclassified grades. The number of pupils who completed primary education and those who transited to secondary education, therefore, increased regardless of performance in the national examination. These findings validate Dufitumukiza (2020), Khatete (2018), Stott et al (2015), and Chohan and Qadir (2011) who pointed out that policies on students’ progression affect students’ participation rates when using effectively. However, sticking to the cutting point causes cases of repetition and dropout, hence a decline in internal efficiency.

The construction of new schools and classrooms, and establishing day schools rates the third with 48.21 and 46.15 per cent of respondents who considered its effects on students’ enrolment to be very high and high respectively. Teacher respondents via FGDs explained that:

New schools and classroom have increased school supply capacity in terms of places available to children. The accessibility to schools increases as schools is built in the proximity of habitation. Distance home-school ceases to be a barrier to students’ participation in secondary education as the government constructs many schools in proximity of habitation. Also, establishing day schools in the same compound as a primary school has been a strong encouragement for primary school learners to take up studies at the secondary education level in a straightforward manner (FGD, 2020).

This is in agreement with AAI (2015) and Kaburu (2014) that the availability of schools and classrooms expand or limit the capacity of new school registrations and enrolments in general. Also, the results of this study validate others’ findings that students’ enrolment is significantly influenced by the reduction of home-school distance and decline in financial burden as a result of construction and establishing new day schools in home proximity (Mugangi et al., 2017; NCERT, 2016; Ngome & Kikechi, 2015; Mwaka & Njogu, 2014). Parents are enthusiastic to send children to a school where school facilities are adequate and near homes for them to follow children education (Kaburu, 2014; Ibrahim et al., 2014).

However, respondents considered the construction of new classrooms in the existing schools ‘compound mainly useful to improve the quality of education by reducing overcrowded classes and student-teacher ratio than increasing enrolments. The children who had already distance barriers continued to have the same problem. This argumentation, therefore, revealed the existing need to expand day schools in proximity of habitation for more enrolments than increasing schools but far from children’ families (see also NCERT, 2016; AAI, 2015).

Teacher respondents rated the effect of the abolition of school fees on students’ enrolment with a very high (55%) and high (32.99%) consideration. Generally, 88.66 against 2.07 per cent agreed that removing school fees stimulates high enrolment rates at the secondary education level. There was 9.28 per cent who remain undecided about the effect of abolishing school fees. This result fits with the findings from FGDs that:

The removal of school fees has stopped parents’ excuses to send children to school due to lack of school fees. With this intervention, parents are enabled to concentrate their effort on learning materials for their children (FGD, 2020).

This is in concurrence with the others’ findings that years following the abolition of schools recorded enormous students’ enrolments at primary and secondary education levels (Mutege et al., 2017; Wanjala & Korjiow, 2017; Asia and Pacific Regional Bureau for Education, 2015; EFA Global Monitoring Report, 2015; World Bank, 2009). The provision of universal primary education increases
both enrolment and completion rates at primary education levels while free day secondary education stimulates an influx of primary transition to and enrolments to lower secondary education (AAI, 2015; Muganda, Simiyu, & Riechi, 2016).

The provision of school meals was rated to have a high effect on the proportion of students’ enrolment at the secondary education level. Out of 192 respondents, 41.15 and 28.13 per cent rated its effect to be high and very high respectively. However, 13.02 per cent disagreed with the influence of school meals on students’ enrolment while 17.71 per cent were undecided. Supporting views from FGDS revealed that the provision of meals at school has alleviated the issue of hunger among students. This affected enrolment through students’ retention. The intervention reduced the likelihood to drop out due to hunger. This was in agreement with Patience, Nnagozie, and Obumneke-Okeke (2019) and Afridi (2011) who found a positive impact of school feeding programme on students’ enrolment, retention and performance. The provision of school meals opens a room for maintaining children at school the whole day. Thus, parents gain enough time to work for their families. A slight opposing view on the effect of school feeding on enrolment rates was that:

Not all parents can pay the fees for the school feeding programme. The hunger and food insecurity at the family level continues to attract some children in poor families to leave school earlier than expected. They go for child labour (FGD, 2020).

This infers that the probability to get access to school meal would motivate both high enrolments and perseverance to remain in school as a result of providing school meal to all children with no contribution. Some respondents held the view that:

Contribution to school feeding makes participation in secondary education level difficult for poor families in general and those families with more than one child attending school in particular. The contribution to be paid by parents for one child for school feeding programme would help the whole family members to find what to eat together, hence parents’ decision to concentrate on home needs than the individual child (FGD, 2020).

These views validate Mutegi et al. (2017) and Mutegi (2015) who pointed out that private cost on secondary education correlates with the rate of enrolment, and odds for parents to send children to school vary with the amount to be spent on schooling. The less is the contribution, the higher is parents’ commitment to children education.

Given the descriptive data, teacher respondents have a positive attitude on the effect of 9YBE interventions on students’ enrolment. They, however, criticised that despite school fees were abolished but schools continue to ask parents to give other contributions (school meals, examination paper) in addition to the learning materials and uniforms. These contributions decline household ability to afford education and motivation. Also, secondary schools in proximity of habitation are still few due to the geographical format of the Gisagara district. School locations still make several children travel a long distance or hard to travel, which in turn attract them to stop attending school. The current 9YBE interventions do not address satisfactorily the issue of overage children. Flexibility in students’ progression encourages enrolment but decline the education quality. Learners who fail to achieve minimum competencies are promoted with those who performed well.

The view above attracted to test the hypothesis: There is a statistically significant effect of 9YBE on students’ enrolment using chi-square at the 0.05 significance level. The purpose of the
hypothesis test was to find out whether the 9YBE through a combination of interventions, provision of a school meal, the abolition of school fees, construction of new schools and classrooms and flexibility in students' progression and transition principles was significantly effective to improve students' enrolment. The chi-square test results are presented in Table 3 below:

Table 3
Chi-square results for the effect of 9YBE interventions on students' enrolments

<table>
<thead>
<tr>
<th>Combination of different interventions</th>
<th>Provision of school meals</th>
<th>Abolition of school fees</th>
<th>Construction of new schools &amp; establishing day secondary school</th>
<th>Flexibility in students' progression &amp; transition principles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>407.649a</td>
<td>89.406c</td>
<td>220.794a</td>
<td>154.149d</td>
</tr>
<tr>
<td>df</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Asymp. Sig.</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 3 illustrates the actual results of the chi-square goodness of fit test on the effect of each intervention under the implementation of the 9YBE policy on students' enrolment. The $\chi^2$ test result for the effect of the combination of different interventions on students' enrolment was $\chi^2 (4) = 407.669, p < .05$. This implies that a combination of interventions has a statistically significant effect on students' enrolment. The calculated $\chi^2$ test result for the provision of school meal was $\chi^2 (4) = 89.406, p < .05$. This means that providing school meals has a significant effect on students' enrolment at lower secondary education. For the removal of school fees, the calculated value was $\chi^2 (4) = 220.794, p < .05$. This was evidence that the abolition of school fees significantly affects the rate of students' enrolment.

Besides, the test statistic for the construction of new schools and establishing day schools was $\chi^2 (3) = 154.149, p < .05$. This implies that students' enrolment at lower secondary education was significantly affected by the construction of new schools in proximity of home and establishing day secondary schools. The calculated value the calculated $\chi^2$ value for flexibility in pupils' progression and transition principles whether using an automatic promotion or ceiling repetition rate was $\chi^2 (4) = 333.282, p < .05$ which is an indication that flexibility in students' progression has a statistically significant effect on students' enrolment.

All 9YBE interventions scored $P$-values less than 0.05 significance level. This implies that the hypothesis: there is a statistically significant effect of 9YBE on students' enrolment in the Gisagara district can be accepted. These results are in line with World Bank (2018), Snilstveit, et al. (2015), Asia and Pacific Regional Bureau for Education (2015) and EFA Global Monitoring Report (2015) who argued that interventions that improve students participation rates are those focusing on children, those reducing or removing financial household level barriers to education, and those improving the quality of school teaching and learning environment. For instance, school feeding programme fits into child-centred interventions, removal of school fees falls into household centred interventions while construction of new schools, establishing day school and flexibility in students' progression fit into those interventions that make school more attractive.
Implications of findings on tertiary education students’ participation rates

The findings of this study validate MINEDUC (2020) that the provision of both nine and twelve-year basic education programmes by abolishing school fees, providing school meal, constructing new schools and establishing day secondary schools in proximity of habitation and flexibility in students’ progression has led to the increase in enrolment at both basic education and tertiary education levels. Lower secondary enrolments increased from 42.5 per cent in 2016 to 53.0 per cent in 2019. The transition rate to upper secondary education rose to 86.1 per cent in 2018/19 from 82.8 per cent in 2015/16. Thus, secondary enrolments increased from 37.2 per cent in 2016 to 42.5 per cent in 2019. The number of students who completed upper secondary education and admitted to tertiary education increased from 47.2 per cent in 2016 to 48.9 per cent in 2017.

However, the transition from secondary to tertiary institutions is still low as compared to the number of students who complete secondary education (MINEDUC, 2020; 2018). Similarly to the situation in basic education, students’ participation rates in Rwandan tertiary education institutions are expanded or limited by different factors including financial constraints to afford university cost including tuition and living fees and location which attracts transport fees (MINEDUC, 2020; Laterite, 2017). In contrast to nine-year basic education, enrolments at the tertiary education level have grown faster in private universities than in public universities. This was due to the increase in tuition fees to programmes offered by public tertiary education institutions and the level of accessibility to them. Thus, parents and students opted to enrol in cheaper courses and nearby private institutions (MINEDUC, 2018). This is in concurrence with Mehboob, Shah and Bhutto (2012) that availability of facilities, financial aids and parents or guardian’ influence are potential predictors of students’ enrolment at tertiary education. Tertiary education enrolments are subject to the student, parents/household and college centred factors as is the case in basic education levels. This implies that interventions that address student, household/parent and school/college centred problems could increase the odds for high students’ participation rates at higher education level (Staiculescu & Richiteanu, 2018; Snilstveit, et al., 2015; Mehboob, Shah & Bhutto, 2012).

The findings (learner, household and school centred interventions are significantly associated with students’ enrolment rates at the basic education level) provide a rational basis to reflect on interventions that could help to improve students’ participation rates in tertiary education. Like in basic education, studies on tertiary education indicate the issue of low students’ enrolment and dropout in higher learning institution as a result of many factors. These include but not limited to student background, income level which affects the ability to afford the cost of education, inadequate prerequisites to cope with university courses, lack of support and counselling services (Staiculescu & Richiteanu, 2018; Mehboob, Shah & Bhutto, 2012). The findings of this study therefore open room to assume that all interventions that focus on (i) improving students’ academic ability to benefit from education and general health conditions, (ii) reducing the financial burden to education such as scholarships and allowances to cover all or some of the costs associated with education and (iii) improving the quality of the teaching and learning environment (infrastructure and facilities) may be helpful to increase enrolments at tertiary education level as it is the case for basic education (Snilstveit, et al. (2015). the attention could be paid to the need difference between basic education learners and university students.
Conclusion

This study aimed to determine the effect of Nine Year Basic Education (9YBE) on students’ enrolments with a case of Gisagara district in Rwanda. The provision of nine-year basic education in Rwanda consisted of increasing students’ participation rate and secondary enrolment in particular. This has been done through different interventions that centred on the child, household and school system. The study findings determined the existence of a significant effect of each 9YBE intervention on students’ enrolment rates to lower secondary education. The effect of the combination of interventions and flexibility of students’ progression was considered to be very high as compared to that of removal of school fees, provision of school meals, and construction of new schools and establishing day schools. Also, the findings provided enough evidence that there is no single intervention that can alleviate all disruptive forces against high students’ enrolment at the secondary education level, hence the need to apply many interventions concurrently.

The effect of educational interventions in basic education are also felt at higher education level. The expansion of secondary school’s enrolment and completion rates have increased the demand for higher education in Rwanda. Tertiary education institutions are therefore called to respond to the influx of students graduating from secondary education who demand for university admission.

However, the use of automatic promotion or similar strategies (5 per cent repetition principle) to promote high-level participation rates at basic education levels is considered as detrimental for quality higher education. Despite the current increase in demand for higher education, the quality in terms of prerequisite knowledge and skills of candidates demanding for university education is very low. This situation calls tertiary education institutions to set up bridging courses or programmes for new intake students to upgrade their knowledge and skills. Besides, there is a need for a deep reflection on the best ways to promote high-level students’ participation rates at all levels of education and safeguard the quality of instructions and graduates simultaneously.

Also, the findings infer that educational interventions that promote students’ participation at basic education level may be important to increase enrolment and efficiency in university education.

At the basic education level, the findings suggested discontinuing schools ask extra contributions in form of school levies as they prevent children from poor families to adequately participate in education, establishing a framework to deal with and retain overage children in the school system, putting in place supporting system for students who progress to the next higher grade with no prerequisite competencies, and expanding free day secondary schools with adequate resources in the proximity of habitation (with consideration of geographical format) as relevant policy implications towards highest students' enrolment rates at the secondary education level. Also, further research should be carried out to explore solution-options to eradicate the issue of many overage children in basic education as compared to specific school-age children.

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Nine Year Basic Education & Students’ Enrolments

https://openknowledge.worldbank.org/bitstream/handle/10986/7173/370920REVISED0101OFFICIALUSEONLY1.pdf?sequence=1&isAllowed=y


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Nine Year Basic Education & Students’ Enrolments


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